

1. The amendment filed on 03/17/2009 has been entered and considered by Examiner.

#### **EXAMINER'S AMENDMENT**

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Patricia A. Verlangieri on April 09, 2009.

- (1) Cancel claims 27-32, and 49-56.
- (2) In claim 6, line 26, replace -- "**wherein the**" -- with "**and such that this**";
- (3) In claim 10, line 33, replace -- "**the**" -- with "**this**".

#### ***Allowable Subject Matter***

3. Claims 1-14, and 16-26, and 45-48 are allowed.
4. The following is an Examiner's statement of reasons for allowance:

Regarding independent claims 1:

The closest prior art of record Weber (US patent No: 6184848 B1) discloses a plasma display panel (in Fig. 3) with coplanar-discharge electrode plate (e.g. pair of address electrodes sustain electrodes having coplanar axis to form a discharge cell )

for discharge region (column 5, lines 45-65, and claim 1 in the reference) , at least a first and second array of coplanar electrode that are coated with a dielectric layer (phosphor coating 56, Fig. 3).

Lee (US Pub. No: 2002/0030645 A1) discloses data electrode pair and data electrode pair for discharge cell, dielectric layer (44, Fig. 5), and SY driver 93 in Fig. 9 applies a negative voltage to the first sustaining electrodes in the address interval. Also the SY driver 93 causes a long-path discharge between the sustaining electrode pairs with respect to the discharge cell selected by applying a sustaining pulse in the sustaining interval but both Weber and Lee do not teach or suggest **an end-of-discharge edge that delimits the electrode element on the opposite side from the discharge edge and is positioned at  $x=x_{cd}$  on the  $O_x$  axis, an interval  $[x_{ab}, x_{bc}]$  of  $x$  such that  $x_{bc}-x_{ab}>0.25 x_{cd}$ ,  $x_{ab} < 0.33x_{cd}$  and  $x_{bc}>0.5x_{cd}$ , wherein the surface potential  $V(x)$  increases as a function of  $x$  in a continuous or discontinuous manner.**

Regarding independent claim 6:

Most prior art of record Weber and Lee do not teach or suggest **an end-of-discharge edge that delimits the electrode element on the opposite side from the discharge edge and is positioned at  $x=x_{cd}$  on the  $O_x$  axis, the shape of the electrode element and the thickness and composition of the dielectric layer are adapted so that there is an interval  $[x_{ab}, x_{bc}]$  of  $x$  such that  $x_{bc}-x_{ab}>0.25 x_{cd}$ ,  $x_{ab} < 0.33x_{cd}$  and  $x_{bc}>0.5x_{cd}$ , wherein the specific longitudinal capacitance  $C(X)$  of the dielectric layer increases continuously or discontinuously, without a**

**decreasing part, from a value of Cab at the start (X=Xab) of the interval to a value of Cbc at the end (X=Xbc) of the interval.**

Regarding independent claim 10:

Most prior art of record Weber and Lee do not teach or suggest **wherein, for each electrode element of this the discharge region, the, point 0 on the Ox axis being located on, what is called an ignition edge of the electrode element facing the other electrode element of the discharge region and the Ox axis being directed towards what is called an end-of-discharge edge, that delimits the electrode element on the opposite side from the discharge edge and is positioned at  $x = x_{\sim}$  on the .Ox axis, the shape of the electrode element, the thickness and the composition of the dielectric laver are adapted so that there is an interval  $[X_{ab}, X_{bc}]$  of values of  $x$  such that  $X_{bc}-X_{ab} > 0.25X_{cd}$ ,  $X_{ab}, 0.33X_{cd}$  and  $X_{bc} > 0.5X_{cd}$  and so that the ratio  $R(x) = 1 - [E_{1(x)} / P_{1(x)}] / [E_{1(x)} / P_{1(x)} + Hc + E_{2(x)} / P_{2(x)}]$**

**(Here,  $E_1(x)$  = thickness in micron of the dielectric layer ;**

**$P_1(x)$ = relative per permittivity of the dielectric layer;**

**$E_2(x)$ = thickness in micron of the dielectric layer;**

**$P_2(x)$ = relative per permittivity of the dielectric layer;)**

**increases continuously or discontinuously, without a decreasing part, from a value of  $R_b$  at the start ( $x = x_{ab}$ ) of the said interval to a value  $R_{\sim}$  at the end ( $x = x_{bc}$ ) of the said interval.**

Regarding independent claim 16:

Most prior art of record Weber and Lee do not teach or suggest **wherein an end-of discharge edge that delimits the electrode element on the opposite side from the discharge edge and is positioned at  $x = x_{cd}$  on the  $O_x$  axis, wherein for each electrode element of each discharge region, the dielectric layer has a constant dielectric constant  $P_1$  and a constant thickness  $E_1$  expressed in microns above the said electrode element, at least for any  $x$  such that  $x_{ab} < x < x_{bc}$ , and in which, with the following definitions:**

**the normalized surface potential  $V_{norm}(x)$ , defined as the ratio of the surface potential  $V(x)$  at a level  $x$  of the dielectric layer for the electrode element in question to the maximum potential  $V_{o-max}$  that would be obtained along the  $O_x$  axis for an electrode element of infinite width, the normalized surface potential  $V_{norm}(x)$  then increasing from a value of  $V_{n-ab} = V_{ab}/V_{o-max}$  at the start ( $x = x_{ab}$ ) of an interval ( $x_{ab}, x_{ac}$ ) to a value of  $V_{n-bc}$  at the end ( $x = x_{bc}$ ) of the interval;**

**an ideal width profile of this electrode element, defined by the equation:**

$$W_{e-id-o}(x) = W_{e-ab} \exp \{29 \sqrt{P1/E1} (X - X_{ab}) * (V_{n-bc} - V_{n-ab}) / (X_{bc} - X_{ab})\}$$

**Here,  $W_{e-ab}$  = total width of the electrode element.**

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### **Inquiry**

4. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Shaheda Abdin whose telephone number is (571) 270-1673.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard HJerpe could be reached at (571) 272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For

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Shaheda Abdin

04/09/2009

/Richard Hjerpe/

Supervisory Patent Examiner, Art Unit 2629

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